The world is fair… It has to be!
The Theory of System Justification Among Women

Research Thesis

Presented in partial fulfillment of the requirements for graduation *with research distinction* in Psychology in the undergraduate colleges of The Ohio State University

by

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Abstract

This research focuses on women's engagement in system justification, using two studies to examine how gender system threat and personal control can affect the levels of economic and gender system justification as well as negative affect/emotions. Study 1(N=65) exposed women to gender threat (sexist ideologies- hostile, benevolent, and complementary) and subsequently measured engagement in justification behaviors. Study 2 (N=60) examined gender specific trait stereotypes and experimentally activated system justification motivation by threatening women's perceptions of the fairness of gender relations. Furthermore, the studies tested the effect of personal control on levels of system justification behaviors. Study 1 results showed that participants who scored higher on complementary sexism scales endorsed higher levels of gender system justification. Study 2 results indicated that participants who had high levels of personal control (vs. no personal control) exhibited high levels of gender system justification. This research has implications for general social change, social policies, and specific communities by providing a pathway to reduce inequalities in the society.

Introduction

Throughout the world, most or all of the available wealth, power, privilege, and prestige is enjoyed by a minority of citizens (Jost & Hunyady, 2002). The distribution of income and wealth is skewed disproportionately in favor of those citizens in the upper most income brackets (top 1% of income bracket). Many people, however, find ways of tolerating and even justifying social and economic disparities as fair, legitimate, necessary, and inevitable. Social scientists typically point to the role of ideology in maintaining popular support for the system by explaining, justifying, and rationalizing inequality in such a way that people are seen as deserving the outcomes and treatment they receive (Jackman, 1994; Lane, 1962; Major, 1994; Sidanius & Pratto, 1999; Tyler & McGraw, 1986). These basic psychological beliefs, employed by people to preserve the legitimacy of the existing social system, are a major focus of system justification theory (Jost & Banaji, 1994). Moreover, research proposes that system justification may be able to account for the phenomenon of participation by disadvantaged individuals and groups in negative stereotyping of themselves.

The Theory of System Justification

System justification theory posits that people have a basic psychological need to believe that the system they live in is just and fair (Jost & Banaji, 1994). These system justifying beliefs contribute to this belief is known as 'system justification', "a process by which existing social arrangements are legitimized, even at the expense of personal and group interest" (Jost & Banaji, 1994, p. 2). System justification theory was originally proposed to account for many common forms of stereotyping and intergroup behavior that could not be explained in terms of prevailing theories (Jost & Banaji, 1994). These past theories tended to stress either ego-justifying motives to maintain or enhance individual self-esteem, or group-justifying motives to maintain or enhance collective self-esteem and/or positive group distinctiveness. For instance, despite their diversity, social comparison theory (e.g. Festinger,

1954; Suls & Wills, 1991), cognitive dissonance theory (Festinger, 1957; Wicklund & Brehm, 1976), attribution theory (e.g. Heider, 1958; Jones, Kanouse, Kelley, Nisbet, Valins & Weiner, 1972; Kelley, 1967), just world theory (Lerner, 1980), and social identity theory (e.g. Hogg & Abrams, 1988; Tajfel, 1978; Tajfel & Turner, 1979, 1986) all emphasize ego-justifying motives in shaping stereotypes and intergroup behavior. Thus, Jost and Banaji (1994), proposed the existence of a system-justifying motive. The most provocative aspect of this research was that members of disadvantaged groups would themselves engage in system justification, even at the expense of their immediate personal or collective interests or esteem, under some conditions.

System justification posits that individuals and groups are motivated to view their social systems as just and desirable — even if they are disadvantaged by these systems — and hence, become motivated to strongly support and defend the status quo and resist changes to those systems (Kay & Zanna 2009, van den Bos 2009). The theory concerns itself with the attitudes and beliefs about social structures, and the motivation people typically display to protect and defend the status quo of the system (Thorisdottir et al. 2009).

Engagement in System Justification

Importantly, system justification theory only assumes that people will engage in this defense process under certain circumstances. A perceived threat to a particular social system, eg.- gender differences in pay, or inequalities in socio-economic status, is likely to cause uncertainty which, in turn leads to system justification. Consistent with this point, prior work shows that people's aversion to uncertainty motivates them to resolve uncertainty when it arises, through a robust defense of the status quo (van den Bos, 2009). Further, these justifying behaviors may be "activated outside an individual's awareness" (Blasi & Jost 2006) or intent (Eidelman & Crandall 2009). Thus people may not be explicitly aware of the

extent to which or even the reasons why they are resisting change and attempting to defend the status quo.

Regarding the question of why people would engage in system justification, especially when this justifying behavior conflicts with other interests and motives, researchers (Jost & Hunyady, 2002) have proposed that system justifying ideologies serve a palliative function in that they reduce anxiety, guilt, dissonance, discomfort, and uncertainty for those who are advantaged and disadvantaged. The model suggests that system threat first contributes to increased uncertainty and anxiety levels which, in turn, motivate compensatory system-justifying behaviors, in order to reduce uncertainty and anxiety initially aroused by system threat. In addition, research by Jost and Thompson (2000) demonstrated, for example, that the extent to which African Americans oppose equal reforms of the system and accept justifications for economic inequality, is related to decreased self-esteem in them, and decreased ingroup favoritism. Further, Jost and Banaji (1994) claimed that members of both high- and low-status groups engage in thoughts, feelings, and behaviors that reinforce and legitimate existing social systems. One example of the legitimation of inequality between groups is outgroup favoritism which refers to the expression of a preference for members of a group to which one does not belong. Thus, engaging in system justification entails some social and psychological costs (as well as benefits) for members of disadvantaged groups.

Engagement in system justification behaviors is observed not only as a coping mechanism in scenarios of exposure to system threats, but Kay, et al. (2008), demonstrated a causal relation between lowered perceptions of personal control and the defense of external systems like religion and the socio-political system. An individual is motivated to maintain a psychologically comfortable levels of order in their environment. Hence, when personal control levels decrease, engagement in behaviors to defend the external system should increase. Research suggesting that in times of threatened personal control, people will

increasingly align themselves with external sources of control. Rothbaum et al., (1982) noted a two-process model of perceived control, where in a distinction was drawn between primary control (personal control) and secondary control (system-justification). Thus, people would rely on secondary forms of control like vicarious control (changing self to fit environment through a higher system or power) when primary personal control is not possible.

This sets up our prediction of a compensatory relationship between levels of perceived personal control and system justifying behaviors. Moreover, it provides a potential explanation of why the personal control manipulation only affected those at low levels of initial system-justifying tendencies. That is, the people who do not chronically lack personal control are responsive to the manipulation of personal control and only show system-justification effects as a compensatory reaction to the condition of having low primary personal control. By contrast, those female participants who chronically system justify are likely doing so because they likely do not have too many experiences of high personal control in daily life. Thus, they are in the habit of immediately turning to the system to make sense of the world. In essence, the secondary forms of control have become the most effective control tactics available. So whether assigned to the high or low personal control group, women still system justify at high levels because that has become the dominant response tendency when facing conditions that arouse the perception of gender inequality.

System Justification Among Women: Depressed Sense of Entitlement

Women represent one specific group who engages in system-justifying behaviors that has increasingly become a focus of system-justifying research. For example, evidence (Gurin, 1985; Major, 1994) suggests that women, in general, are relatively unaware of their status as an oppressed group and, in addition, likely hold many beliefs that are consonant with their own oppression. Gender socialization practices are so thorough in their justification of inequality that girls and women may develop system-justifying attitudes with little or no

conscious awareness (Bem & Bem, 1970). One example of the internalization of gender inequality is the 'depressed sense of entitlement effect' observed among females. This often noted tendency for women to feel that they deserve lower wages than men, serves to perpetuate and justify inequality (Major, 1994). The fact that women also seem to be just as satisfied with their employment situations as men, illustrates that system-justifying beliefs contribute to the creation and maintenance of gender differences in entitlement.

In order to understand how men and women differ in exhibiting system justification behaviors, it is helpful to first understand their general roles in society. An examination of gender stereotype and sex role research illustrates that women are expected to act in a communal manner, including being unselfish, dependent, and concerned with others (Bem, 1947; Eagly & Steffen, 1984; Eagly and Wood, 1991). By contrast, men are expected to be independent, assertive, and competent (Bem, 1947). Research by Major (1994) has suggested that men and women have different views of entitlement in the home and workplace because of societal norms. Women may turn to other dimensions, such as diversity of interests, relationships, emotions, and so on, and weight them more heavily. As a result, women might find their lives richer if they are focused on these more communal dimensions. Conversely, men focus their attention on agentic traits and thus use these stereotypical characteristics to justify their increased status in society compared to women. People operate in social systems and agree to operate by the rules and norms of those systems. Thus, their lives become dependent on these rules and norms. As a result, women may find it beneficial to view the system positively, even to the point of defending its shortcomings.

System Justification and Exposure to Sexist Ideologies

In cases of gender-based stereotyping, attitudes toward the disadvantaged group of women are very often favorable in content and yet prejudicial in their consequences. Research by Eagly and Mladinic (1989, 1993) has most compellingly demonstrated that

although most people hold flattering stereotypes of women as helpful, kind, gentle, warm, and empathic, these beliefs may actually weaken perceptions of their ability and skills. These "benevolent" forms of sexism- in which women are seen as warm and caring, serve to increase support for the system of gender inequality (Glick & Fiske, 1996, 2001). Prior research by Glick et al. (2004) on self-objectification distinguished between hostile sexism, benevolent sexism, and complementary sexism. Benevolent sexism, as stated earlier, represents evaluations of gender that may appear subjectively positive; however, these orientations are actually damaging to people and gender equity more broadly. For instance, benevolent sexism often perpetuates the belief that women need to be protected by men, a belief that undermines women's self-efficacy and autonomy. In contrast, hostile sexism reflects overtly negative evaluations and stereotypes about a gender, including the ideas that women are incompetent and inferior to men. Both types of sexism portray women as being weaker than men and more suitable for traditional domestic roles, thus conveying the notion of division of structural power between the sexes. However, a third type of sexism known as complementary sexism proves to be an important variable that contributes to the support for the status quo and maintaining the legitimacy of the system. This type of sexism incorporates elements of both hostile and benevolent beliefs. From a system justification perspective, the belief that every group in society possesses some advantages and some disadvantages, should increase the sense that the system as a whole is fair, balanced, and legitimate (Kay & Jost, 2003). Complementary sexism reminds people of the reasons why women are both "respected and reviled"— characterizing them as socially valued but also burdensome. In a series of studies, Jost and Kay (2005) found that simply reminding individuals of benevolent and complementary sexist beliefs increased women's (but not men's) support for traditional gender arrangements and the social system as a whole.

These three forms of sexism serve an integral function in the development and expression of system-justifying beliefs, including system justification among women of a system that often disadvantages them. Exposing women to sexist ideologies may be associated with feelings of perceived threat and enable them to engage in varying levels of system justification. Research on the depressed-entitlement effect, gender stereotypes, and circumstances under which women in particular engage in system justifying behaviors will prove to be helpful in understanding the phenomenon of how system justification may influence women's experiences in a society with existing gender gaps.

System Justification Theory and Social Stereotyping

Endorsing stereotypes that contain a balance of positive and negative characteristics about others can serve to satisfy the need to perceive one's social system as fair and balanced. Research suggests that factors like the current distribution of roles and outcomes that people use to allocate certain jobs occurs through a motivational need and is often rationalized through social stereotyping (Hoffman & Hurst, 1990; Jost & Hamilton, 2005; Jost et al., 2009; Kay et al., 2009; Kay, Jimenez, & Jost, 2002; Laurin, Shepherd, & Kay, 2010). Men are often described using agentic stereotype traits like competent, assertive, and competitive, whereas women are characterized by communal traits like being emotional, relationship-oriented and caring. These form a set of stereotypes that have both positive and negative notions regarding women who work together, and in combination create a sense of inequalities between groups. They also perpetuate the notion that men and women are different but equal. Importantly, stereotypes such as these are used to justify men's occupation of high-status positions, and balance women's low-status positions by attributing to them their own set of distinct advantages. This feasibly excuses women's unfair treatment in male-dominated domains (Hoffman & Hurst, 1990; Jackman, 1994; Jost & Hamilton, 2005), while also encouraging women to participate in a system that disadvantages them

(Glick & Fiske, 2001; Jackman, 1994). In addition, exposing women to communal stereotypes increases their satisfaction with the system of gender relations, and with society as a whole (Jost & Kay, 2005).

Thus, evidence suggests that people are willing to categorize and evaluate the groups they belong to according to stereotypes. For instance, McCoy and Major (2007) found that priming women with meritocratic ideology and having them read an article about the high prevalence of sexism against women led them to rate themselves higher on communal traits than on agentic traits. Such findings are consistent with the logic that women may sometimes view themselves as more stereotypically communal and less agentic in order to explain their lower status relative to men and continue to perceive the status quo as being fair and just. The present research focuses on such gender specific self-stereotype traits, examining how endorsement of these stereotypical traits can have an effect on the levels of system justification among women.

Present Research

Women engage to a great extent in system justification behaviors. These actions may occur non-consciously, require less effort and incur less risk than endorsing change to the status quo (Eidelman and Crandall, 2009). The current research specifically aims to gain a better understanding of why women engage in system justifying behaviors. The focus is to examine the psychological variables that contribute towards such behavior. Studies will explicitly examine how variables like personal control and system threat will affect levels of system justification and negative affect. We consider two aspects of system justification- gender specific and general/economic system justification.

According to system justification theory, a perceived threat to a particular social system is likely to trigger justification of that system, due to individuals' aversion to uncertainty (van den Bos 2009). Hence we used two studies that (a) exhibited three

conditions of threat- Hostile sexism, Benevolent sexism, and Complementary sexism in order to determine their effects on the levels of system justification behaviors women may display; and (b) examined gender based self-stereotyping and experimentally activated system justification motivation by threatening women's perceptions of the fairness of gender relations. We predicted that participants exposed to hostile (vs. benevolent or complementary) threats would show the greatest levels of subsequent gender system-justification. In addition, due to the compensatory effect, people place increasing faith in the structure and system when personal control is threatened. When women face a lack of personal control, they try to defend the system by turning to other dimensions- such as diversity of interests or emotions- that can reassure them that things are under control (Kay, et al., 2008). Keeping this notion in mind, we attempt to study the effects of varying levels of personal control on system justification behaviors. We predicted that participants who were high (vs. low) on personal control would show lower subsequent negative affect and gender system justification levels.

As an overview of the experimental design, we will be using two studies to examine the levels of system justification exhibited by women. Study 1(N=65) involved questionnaires that exposed women to gender threat (sexist ideologies) and a personal control task that subsequently measured engagement in justification behaviors. In study 2(N=60), the gender threat task was altered, such that we examined gender specific trait stereotyping and experimentally activated system justification motivation by threatening women's perceptions of the fairness of gender relations. Levels of system justification were measured based on such system threat factors.

Study 1

Study 1 exposed women to a gender threat (sexist ideologies) and a personal control task, and measured engagement in justification behaviors. During the course of this study, participants completed measures of gender system justification, economic system justification, and negative affect levels at three times points. Study 1, thus used a 3 (threat: benevolent, complementary, hostile) x 2 (control: low vs. high) x 3 (time of estimate: Time 1, Time 2, Time 3) mixed model factorial design with threat and control as the two between subjects factors crossed with time of measurement as the repeated measures factor. The primary aim of study 1 was to examine the effect of gender threatening sexist ideologies and personal control on system justification behaviors.

Method

Research Participants. 65 female undergraduate students at The Ohio State University were recruited through the REP system to participate for partial fulfillment of a requirement for an introductory psychology class.

Procedure. Participants were brought into the lab and asked to sit at individual computers to complete the experiment. All experimental and study instructions were provided on the computer screens.

Participants were first asked to complete scales measuring economic system justification, gender specific system justification, and negative affect, which provided baseline (Time 1) measures. Participants then completed one of three questionnaires designed to manipulate the experience of threat. Depending on condition, participants either completed a scale related to hostile sexism, benevolent sexism, or complementary sexism. These scales were intended to serve as a gender threat for women by using gender based stereotyping ideologies to make the notion of gender inequality salient. Participants then completed Time 2 measures of the same justification and negative affect scales that were

used to measure time 1 levels. Finally, participants completed a personal control manipulation task (high vs. no control) followed by Time 3 measures of the set of justification and affect scales. Assessing justification and negative affect levels at various times during the course of the study enabled us to examine the immediate effects of threat and personal control.

Measures

System Justification. The economic system justification scale, developed by Jost and Thompson (2000), is a 17 items measure of the degree to which people perceive economic inequality to be fair, legitimate, and necessary. Statements include, "If people work hard, they almost always get what they want" and "Laws of nature are responsible for differences in wealth in society".

The gender specific system justification scale, developed by Jost and Kay (2005), is an 8 items measure which was designed to assess the tendency to legitimize gender inequality. Statements include, "In general, relations between men and women are fair" and "The division of labor in families generally operates as it should". Participants responded to the extent to which they agreed or disagreed with the statements in both system justification scales based on 9-point ratings (1 = strongly agree to 9 = strongly disagree).

Affect. Negative affect was measured using items from the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), which consists of a number of words that describe different feelings and emotions. Participants responded to selected negative emotion items from the scale such as distressed, upset, guilty, scared, hostile, irritable, nervous, ashamed, and afraid. They indicated the extent to which they experienced these emotions at that moment and recorded their responses on a 5-point scale (1= very slightly or not at all, to 5= extremely).

Manipulation of Threat. After completing the baseline measures described above, participants were exposed to a gender system threat task using sexist ideology scales (Glick & Fiske, 1996). This independent variable of system threat was broken down into three components, hostile sexism, benevolent sexism, and complementary sexism. Participants were randomly assigned to one of these three conditions and completed the respective threat scales wherein they rated their agreement with the statements on a 5-point scale (1= strongly disagree, to 5= strongly agree). The hostile threat scale reflects overtly negative evaluations and stereotypes about a gender and includes statements like: "women are incompetent and inferior to men"; and "women exaggerate problems they have at work". Benevolent sexism represents evaluations of gender that may appear subjectively positive, but are actually damaging to people and gender equity more broadly. The scale includes items like: "women should be cherished and protected by men"; and "a good woman should be set on a pedestal by her man". Complementary sexism on the other hand incorporates notions from both hostile and benevolent sexism. Items from both the hostile sexism and benevolent sexism scales were combined to present complementary sexist beliefs: "women should be cherished and protected by men" (benevolent sexism); and "women seek to gain power by getting control over men" (hostile sexism).

After completion of the gender threat manipulation task, participants once again completed the same economic system justification, gender system justification, and negative affect scales as those completed in the beginning of the study. This provided Time 2 measures that would serve as the dependent variables, and would also serve to observe the effect of threat, in particular, on levels of system justification and negative emotions.

Personal Control Manipulation. For the final part of study 1, participants completed a personal control manipulation task which involved a memory test, wherein they were asked to recall a particular scenario where they either had or did not have control of the situation at

hand. Participants were randomly assigned to either a "Have control" or "No control" condition. Those in the former condition were posed with the following extract: *"Please recall a particular incident in which something happened and you had control over the situation. Please describe the situation- what happened, how you felt, etc., in up to 100 words."* Those in the "no control" condition were asked to write about a time when they had lack of control of the situation. Specifically they were presented with the prompt: *"Please recall a particular incident in which something happened and you had no control over the situation. Please describe the situation- what happened, how you felt, etc., in up to 100 words."*

Upon completion of this task, final Time 3 measures of economic and gender system justification and negative affect were completed using the same scales used at Time 1 and Time 2. This was done in order to examine the effect of personal control on system justification levels in particular. Participants were then debriefed about the experiment and thanked for their participation.

Hypothesis. We predicted that participants exposed to a hostile sexism threat (vs. complementary or benevolent) would show an increase in gender system justification levels and negative affect levels at Time 2 and Time 3 compared to Time 1 levels. Also, those exposed to the high (vs. low) personal control task would show lower negative affect levels and system justification levels at Time 3 compared to the Time 1 baseline measures.

Results

To test our primary hypotheses, we conducted moderation analyses using PROCESS (Hayes, 2012). No significant effects emerged in support of either hypothesis. As per our initial predictions, analyses did not yield significant interactive effects between hostile threat and Time 2 or Time 3 gender system justification. Inconsistent with Hypothesis 1, participants in the hostile (vs. benevolent or complementary) condition did not show

increased Time 2 or Time 3 gender system justification or negative affect, all Fs < 3.47, all *p*s > .07. In addition, there was no significant interactive effect between the high personal control condition and Time 3 levels of system justification or Time 3 negative affect levels. Hence, inconsistent with Hypothesis 2, participants in the high (vs. low) personal control condition did not show a decrease in the Time 3 levels of gender or economic system justification, or in negative affect, all Fs < 1.47, all *p*s > .23.

Explanatory Analyses

We turned to several secondary analyses to investigate how Time 1 measures of system justification might interact with gender threats or personal control to predict subsequent levels of system justification and negative affect measured at Time 2 and Time 3.

Gender System Justification. Analyses of moderation using PROCESS (Hayes, 2012) yielded two significant effects in relation to the threat conditions (hostile, benevolent, and complementary) and the levels of system justification (economic and gender). First there was a marginally significant interaction between threat conditions and Time 1 economic system justification levels when predicting Time 2 gender specific system justification, b = -.31, SE = .16, $t(61)$ = -1.86, $p < .10$. Simple slopes analyses showed that at low levels of Time 1 economic system justification, the effect of threat conditions was significant, b = .34, SE = .14, $t(61)$ = 2.4, $p < .05$. The complementary threat condition exhibited the highest levels of Time 2 gender system justification behaviors at low baseline levels of economic system justification behaviors, when compared to hostile and benevolent threat conditions (see Figure 1). At high Time 1 economic system justification there was no effect of threat conditions, b = -.06, SE = .15, $t(61)$ = -.39, p =.70 In addition, simple slope analyses showed that within the hostile threat condition there is a significant effect of Time 1 economic system justification on Time 2 gender system justification, b = .55, SE = .16, $t(61)$ = 3.5, $p < .05$. The hostile condition thus showed the greatest difference in gender system justification levels

when moving from low to high baseline economic justification levels. The effect was also prominent in the benevolent condition, but less so than the hostile condition, $b = .31$, $SE = .13$, $t(61) = 2.39$, $p < .05$. This effect was not prominent in the complementary threat condition, $b = .06$, $SE = .21$, $t(61) = .28$, $p = .78$.

In addition to the above effects on Time 2 gender system justification, effects also emerged on Time 3 gender system justification. Although a significant interactive effect was not noticed between threat conditions and Time 1 economic system justification when predicting for Time 3 levels of gender system justification, $b = -.26$, $SE = .16$, $t(62) = -1.59$, $p = .11$, there was evidence of an interaction between Time 1 economic system justification and threat given that the effect of threat conditions changes across levels of Time 1 economic system justification. There was a significant effect of the complementary threat condition at low levels of Time 1 economic system justification, $b = .34$, $SE = .14$, $t(62) = 2.49$, $p < .05$. That is, participants in the complementary threat condition exhibited the highest levels of Time 2 gender system justification behaviors at low baseline levels of economic system justification, when compared to hostile and benevolent threat conditions (see Figure 2). There was no significant effect of threat conditions at high Time 1 levels of economic system justification, $b = .01$, $SE = .15$, $t(62) = .05$, $p = .96$. Finally, the hostile threat condition again showed the greatest difference in gender system justification levels when moving from low to high baseline economic justification levels, $b = .53$, $SE = .15$, $t(62) = 3.4$, $p < .05$.

Negative Affect. *Regarding* the effect of threat condition on negative affect, further analyses provided evidence for a significant interactive effect of threat conditions and Time 1 levels of gender justification when predicting Time 2 levels of negative affect, $b = .41$, $SE = .12$, $t(62) = 3.4$, $p < .05$. In addition, both hostile and complementary threat conditions showed significant effects on levels of negative affect, $b = -.36$, $SE = .12$, $t(62) = -2.99$, $p < .05$ for the hostile condition, and, $b = .23$, $SE = .12$, $t(62) = 1.83$, $p < .05$ for the

complementary condition. The benevolent threat condition did not show a significant effect, $b = -.07$, $SE = .09$, $t(62) = -.77$, $p = .44$.

An interactive effect was also found between threat conditions and Time 1 gender system justification when predicting Time 3 negative affect levels, i.e. after being exposed to the personal control task, $b = .32$, $SE = .11$, $t(62) = 2.81$, $p < .05$. This effect was seen more so for those who had been exposed to hostile threat and thus showed greater negative emotions than those exposed to the other threat conditions, $b = -.35$, $SE = .11$, $t(62) = -3.14$, $p < .05$. Effects were not significant for the benevolent threat condition, $b = -.13$, $SE = .08$, $t(62) = -1.56$, $p = .12$, or the complementary threat condition, $b = .10$, $SE = .12$, $t(62) = .86$, $p = .39$.

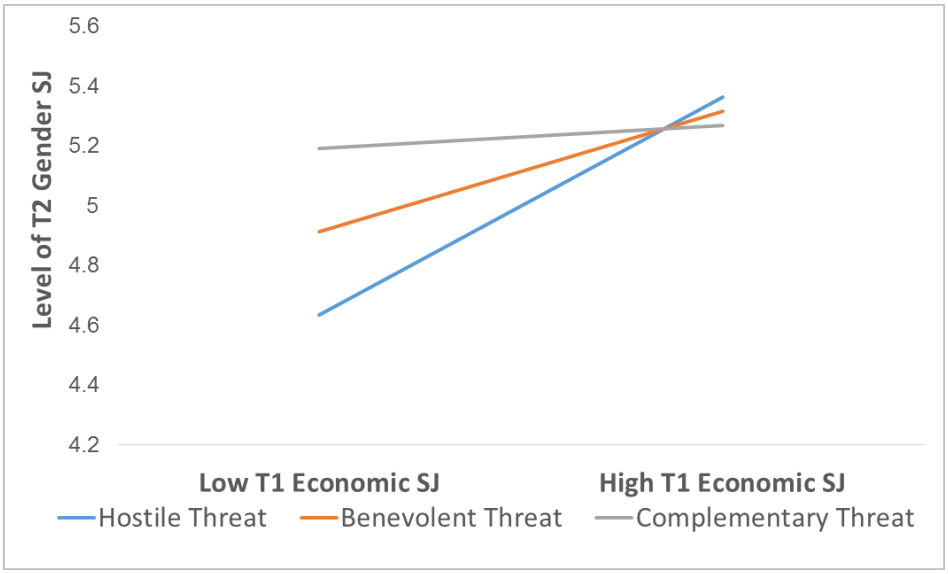

Figure 1. Marginally significant interaction between Threat Condition and Time 1 Economic System Justification when predicting Time 2 Gender System Justification ($p < .10$)

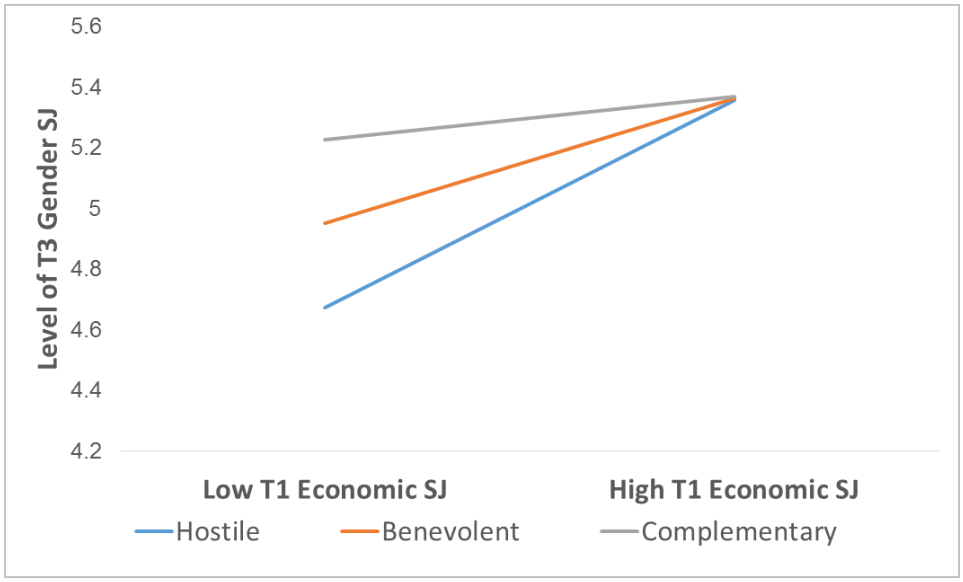

Figure 2. Interaction between Threat and Time 1 Economic System Justification when predicting Time 3 Gender System Justification. Main effect showing interaction of threat (complementary condition) and low baseline economic system justification ($p < .05$).

Discussion

Based on research by Jost and Kay (2005), women exposed to sexist ideologies and reminded of gender specific stereotypes may feel threatened. Women may react to such threats by engaging in system justifying behaviors in an effort to reestablish a sense of control or reduce psychological discomfort and feelings of uncertainty (Jost & Hunyady, 2002). We predicted that the greater the level of threat a woman is exposed to, the stronger this tendency will be to justify the related system. For instance, sexist ideologies that represent more extreme negative evaluations of a gender should be followed by the highest levels of system justification behaviors. Hence, participants in the present study exposed to hostile sexism should feel the most threatened and thereby try to enhance their reliability on behaviors that will provide a justification for the gender inequalities, in order to reduce their discomfort and maintain their notion that the system is just and fair.

The findings from study 1 did provide some evidence supporting this proposed relationship between system threats and system justification. Analyses showed that participants exposed to a hostile sexism threat do engage in gender system justification, but only if they show a tendency to engage in system justification reflected in high baseline levels of economic system justification. However, those exposed to a hostile sexism threat who have lower levels of economic justification to begin with, were less likely to justify the gender inequalities and reported low levels of gender based system justification. This increase in gender system justification levels when moving from low to high levels of baseline economic justification is most prominent in the hostile threat condition when compared to benevolent and complementary sexism.

One way to interpret the effects on both Time 2 and Time 3 levels of gender system justification is to conclude that high levels of one type of system justification extends to high levels of other domains of system justification. Those who currently engage to a great degree

in justifying behaviors for one domain, in this case economic, will go on to subsequently justify inequalities in the system to a high level in other domains, such as gender. Moreover, this shift in the domain of justification behavior seems to result from being reminded of sexist ideologies. Women who initially tend to justify system inequalities in a more economic and broad fashion, once reminded of a gender specific threat, will go on to justify the inequalities using a gender based approach rather than in an economic one. Hence, they rely on aspects of their gender traits and characteristics to justify the gender inequalities. Along the lines of research by McCoy and Major (2007), when women are primed with an ideology that targets their gender (e.g., an article about high prevalence of sexism against women), they tend to use gender trait stereotypes (communal traits) to account for the inequalities and increase their satisfaction with the system of gender relations, and with society as a whole. Similarly, findings in the present study suggest that after being primed with sexist ideologies, women may use such gender specific trait stereotypes (gender system justification behaviors) to justify the system rather than taking a broad, economic approach.

Finally, a significant finding in this study showed that the complementary sexism threat condition was paired with the highest levels of gender system justification for those participants who had low baseline levels of economic justification. Due to the fact that complementary sexism incorporates elements of both hostile and benevolent beliefs, it leads to the notion that every group in society possesses some advantages and some disadvantages. Jost and Kay (2005) found that reminding women of reasons why they should be both appreciated and loathed increases support for traditional gender arrangements and the social system as a whole. Consistent with this work, study 1 portrayed similar effects in terms of complementary sexism exhibiting the highest levels of justification behaviors compared to benevolent and hostile types.

Study 1 found no significant effects in relation to levels of personal control and engagement in system justifying, or between personal control and negative affect. However, these effects were tested in study 2 which focused on the association between gender trait specific stereotypes and levels of system justification behaviors, as well as the effect of personal control on justifying behaviors.

Study 2

In study 2 the gender threat task was altered, such that we examined gender specific trait stereotyping and experimentally activated system justification motivation by threatening women's perceptions of the fairness of gender relations. Levels of system justification were measured based on such system threat factors. In addition, economic and gender system justification and negative affect levels were measured at two time points during the course of this experiment. Study 2, thus used a 2 (threat: high vs. no) x 2 (control: low vs. high) x 2 (time of estimate: Time 1, Time 2) mixed model factorial design with threat and control as the two between subjects factors crossed with time of measurement as the repeated measures factor. The primary aim of study 2 was to examine the effect of gender stereotypical threats and personal control on system justification behaviors.

Method

Research Participants. 60 female undergraduate students at The Ohio State University were recruited through the REP system to participate for partial fulfillment of a requirement for an introductory psychology class.

Procedure. Participants were brought into the lab and asked to sit at individual computers to complete the experiment. All experimental and study instructions were provided on the computer screens.

Participants were first asked to complete scales measuring economic system justification, gender specific system justification, and negative affect, which provided

baseline (Time 1) measures. Participants were then exposed to a gender threat scenario wherein they were either given an article to read that described the high prevalence of gender inequality, or an article that described the construction of a new water system in Hungary. This task was meant to be perceived as a threat as it targeted women's perceptions of the fairness of gender relations. Finally, participants completed a personal control manipulation task (high vs. no control) which was followed by Time 2 measure of justification and negative affect levels using the same scales that were used to measure Time 1 levels. Assessing justification and negative affect levels for a second time during the course of the study enabled us to examine the effects that threat and personal control may have on these variables.

Measures

System Justification and Affect. Economic system justification, gender system justification, and negative affect levels were measure using the same scales as used in Study 1. Economic system justification was assessed using the 17 items measure of the degree to which people perceive economic inequality to be fair, legitimate, and necessary. Gender specific system justification was measured using the 8 item scale which was designed to assess the tendency to legitimize gender inequality. Negative affect was measured using items from the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988).

Gender threat manipulation. Thereafter, participants were exposed to a gender threat scenario wherein they were either given an article to read that described the high prevalence of gender inequality (high salience condition), or an article that described the construction of a new water system in Hungary (control condition). Participants were randomly assigned to the threat condition. Those in the high threat condition were told to read the following extract (Laurin, Kay, & Shephard, 2010):

"According to Statistics in the United States, male university graduates in this country are more financially successful than their female counterparts. For instance, US female graduates are paying off their debt more slowly than their male counterparts. To illustrate, in the United States 60% of males completely pay off their student debt within 2 years. In contrast, only 25% of women manage such a feat. In addition, these men's salaries upon entering their first job after graduating are a full 20% higher than women's starting salaries."

In the control condition, participants read the following fictional article about a new water system in Hungary.

"Future plans for a new water system in Hungary were announced today by Karl Berman, who is the head of the Hungarian hydrological commission. The waterway, although a modest endeavour, will divert 10% of the water that flows into the Duna River. The goal of this project is to raise the water level in the smaller streams that connect to the Duna further upstream. The project should also create new tributaries atop land that is currently being unused. While no decisions have been made as to how these new tributaries will be utilized, Hungarian officials are planning to meet in the following weeks in order to discuss the matter further."

Following this manipulation, participants were given a list of 12 adjectives that included 6 communal traits (kind, modest, emotional, sensitive, caring, and warm) and 6 agentic traits ((ambitious, competent, intelligent, aggressive, self-confident, and assertive). They were told to pick and rank the 6 most self-descriptive traits that would be most applicable to them.

Personal Control Manipulation. As a next step of the experiment, participants completed the same personal control memory task that was given to the participants in study 1. That is, participants were randomly assigned to 'have personal control/high salience' or

'no control' condition. Those in the 'have control' condition were asked to recall a particular scenario wherein they had control of the situation. Those in the 'no control' condition were asked to recall a scenario wherein they had no control of the situation at hand. In both prompts, participants were asked to explain their experiences in up to 100 words.

As a final part of the study, participants completed a Time 2 measure of economic justification, gender justification, and negative affect levels. They responded to the set of identical scales that were given to them at the start of the experiment (as a baseline/ Time 1 measure). Participants were finally debriefed and thanked for their participation in the experiment.

Hypothesis. We predicted that participants exposed to the threat task (vs. no threat condition) would show an increase in gender system justification and negative affect levels at Time 2 compared to Time 1 levels. Also, participants exposed to the high (vs. low) personal control task would show a slight increase in gender system justification and negative affect levels at Time 2 compared to baseline Time 1 measures.

Results

To test our primary hypotheses, we conducted moderation analyses using PROCESS (Hayes, 2012). No significant effects emerged in support of our initial predictions. As per our initial predictions, analyses did not yield significant interactive effects between the high threat task and Time 2 gender system justification levels or Time 2 negative affect levels. Inconsistent with Hypothesis 1, participants in the threat (vs. no threat) task did not show increased Time 2 gender system justification or negative affect levels, all $Fs < 2.22$, all $ps > .14$. Furthermore, there was no interactive effect between the high personal control condition and Time 2 levels of gender system justification or negative affect. Thus, inconsistent with Hypothesis 2, participants exposed to the high (vs. low) personal control memory task did not

show an increase in Time 2 gender system justification behaviors or negative affect levels, all Fs < 3.55, all *p*s > .07.

Explanatory Analyses

We used secondary analyses to investigate how Time 1 measures of economic and gender system justification interact with levels of personal control to predict subsequent levels of system justification at Time 2.

Gender System Justification. Analyses of moderation using PROCESS (Hayes, 2012) yielded two significant effects in relation to personal control (high or no control) and the levels of system justification (economic and gender). First, although a significant interactive effect was not noticed between levels of personal control and Time 1 economic system justification when predicting for Time 2 levels of gender system justification, b = -.45, SE = .34, $t(53)$ = -1.34, p = .19, there was evidence of an interaction between Time 1 economic system justification and personal control given that the effect of personal control changes across levels of Time 1 economic system justification. There was a significant effect of personal control at low levels of Time 1 economic system justification, b = .64, SE = .29, $t(53)$ = 2.15, p < .05. Thus, participants who were exposed to the high personal control condition exhibited higher levels of Time 2 gender system justification behaviors at low baseline levels of economic system justification behaviors, when compared to participants who were told that they had no control (see Figure 3). There is no significant effect of personal control when one shifts to high levels of Time 1 gender system justification, b = .08, SE = .30, $t(53)$ = .25, p = .80. Simple slope analyses showed that within the 'no control' condition there is a significant effect of Time 1 economic system justification on Time 2 gender system justification, b = 1.03, SE = .26, $t(53)$ = 3.93, p < .05. Those who were told that they had no personal control thus showed the greatest difference in gender system justification levels when moving from low to high baseline economic justification levels.

This effect was not prominent in the high personal control condition, b = .39, SE = .29, t(53) = 1.36, p = .18.

We also found an effect in relation to personal control and Time 1 gender system justification when predicting Time 2 levels of gender system justification. Once again, there was no interactive effect observed between these variables per se, b = -.14, SE = .14, t(53) = -.93, p = .36. However, there was an interaction between Time 1 gender system justification and personal control given that the effect of personal control changes across levels of Time 1 gender system justification. Like the previous in relation to personal control and Time 1 economic justification, this study similarly showed a significant effect of personal control at low levels of Time 1 gender system justification, b = .41, SE = .17, t(53) = 2.44, $p < .05$ (see Figure 4). There is no significant effect of personal control when one shifts to high levels of Time 1 gender system justification, b = .19, SE = .17, t(53) = 1.13, p = .26. Simple slope analyses showed that both high and no control conditions produced a more or less similar effect when moving from low to high baseline gender justification levels, while predicting Time 2 gender justification levels: b = .97, SE = .09, t(53) = 10.0, p = 0 for the have control condition, and b = .83, SE = .11, t(53) = 7.5, p = 0 for the no control condition.

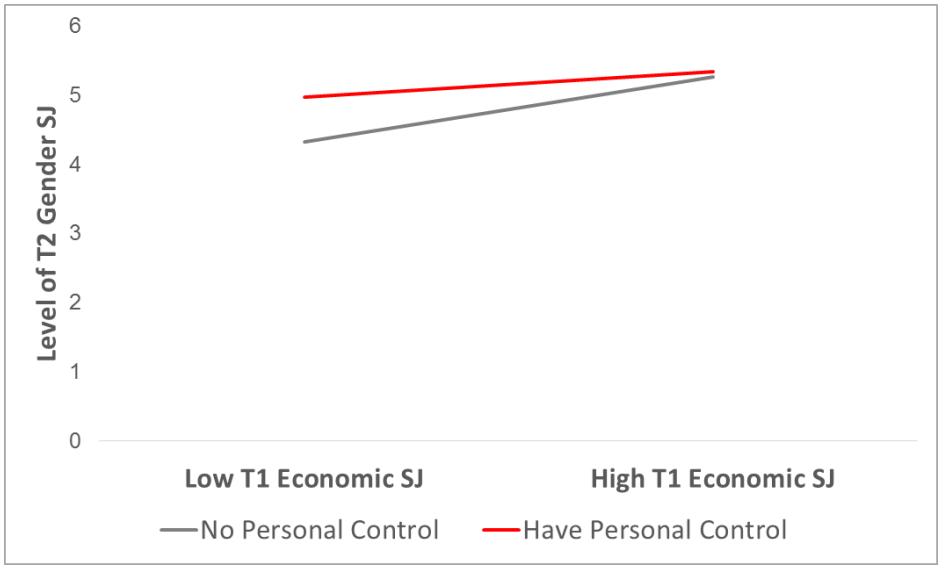

Figure 3. Interaction between Personal Control and Time 1 Economic System Justification when predicting Time 2 Gender System Justification. Main effect showing interaction of 'have' personal control condition and low baseline economic system justification ($p < .05$).

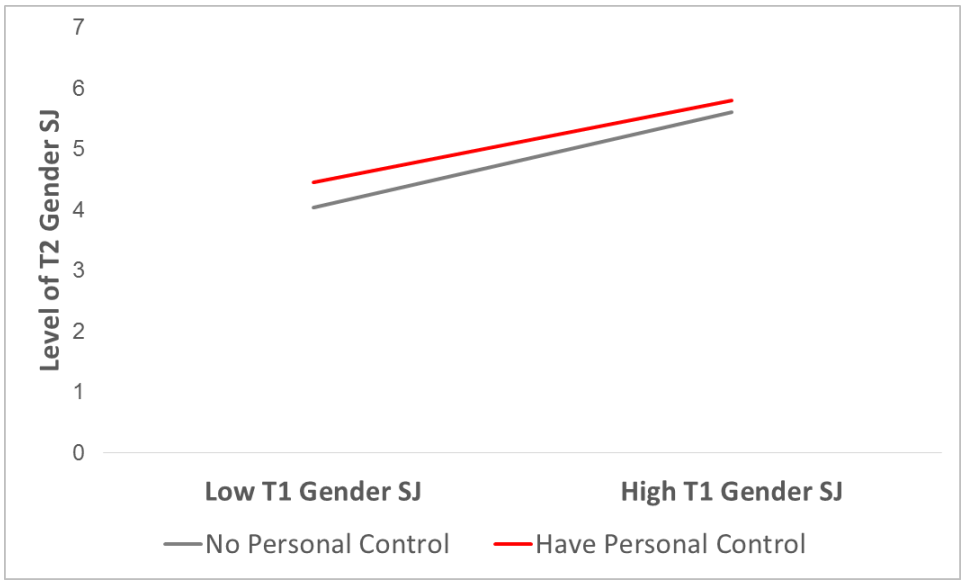

Figure 4. Interaction between Personal Control and Time 1 Gender System Justification when predicting Time 2 Gender System Justification. Main effect showing interaction of 'have' personal control condition and low baseline gender system justification ($p < .05$).

Discussion

Along the lines of research by Hoffman & Hurst, 1990; Jackman, 1994; Jost & Hamilton, 2005; Glick & Fiske, 2001; and Jost & Kay, 2005, men and women endorse certain gender based stereotypes that can be used as a route towards justifying system and gender inequalities. Women view themselves along a relationship- oriented spectrum which are characterized by communal traits. Due to the fact that men use agentic stereotypical traits to prove their higher status in society (compared to females), women are provided with an excuse for unfair treatment in male-dominated domains, and are subsequently made to participate in a system that disadvantages them. Moreover, exposing women to communal stereotypical traits increases their satisfaction with the system of gender relations, and with society as a whole. We predicted that levels of system justification should increase after being exposed to the threat scenario where in participants are made to read an article about gender inequality and then asked to choose 6 traits from a list of communal and agentic characteristics. Furthermore, this rise in level should be seen once the personal control task has been completed as well.

Findings in study 2 did not provide evidence in relation to the link between threat and system justification behaviors, but it did portray some evidence supporting the proposed relationship between personal control and system justification. Research by Kay, et al. (2008) suggested that when levels of personal control decrease, the endorsement and defense of external systems of control should increase. According to Rothbaum et al. (1982), when people's ability to directly influence their environment is taken away, they tend to rely on other processes like gaining a sense of personal control by identifying with powerful others, and thereby using this strategy to justify the system. However, even though a lack of personal control urges one to justify the inequalities of the system, results showed an interesting notion of how those possessing a high sense of personal control tend to engage in greater levels of

gender based justification behaviors, which was consistent with our predictions. This was true only for those who initially possessed high baseline levels of economic system justification or gender based justification. One way to interpret this effect, would be to conclude that the levels of gender based justification were probably increasing due to the fact that the participants completed the gender threat scenario right before taking the personal control task. This may have posed a perceived threat to them thereby enhancing their motivation to justify the gender inequality. Even though no significant effect was found in relation to threat and system justification behaviors, this motivation to justify the inequality may have surpassed the feelings to reduce justification levels even after they were told that they had high personal control. Hence, though having this high sense of personal control should actually reduce justification behaviors, the feelings of threat posed to the participants' may have lingered on even after the personal control task, thereby urging them to continue engaging in system justifying behaviors. Specific analyses of the 'no control' condition did however provide evidence that suggested that there was a greater difference in Time 2 gender system justification levels when one moves from low baseline levels of economic system justification to high baseline levels. This suggests that people who have no personal control do show an increase in the level of engagement in gender system justification behaviors, but more so when they have high baseline levels of economic justification behaviors, rather than those who have lower levels of economic system justification to begin with. Study 2 in addition, found no significant effects for threat or personal control in relation to negative affect levels. Thus, this domain can be tested in future studies.

General Discussion

Across both studies, we predicted that when women are made to recognize that they have personal control over a situation, they may resort to reducing their engagement in justifying behaviors. Furthermore, exposing women to sexist ideologies and reminding them

of gender specific stereotypes, may be perceived as being threatening and thereby urge women to engage in system justifying behaviors. Analyses of our studies did not directly support these hypotheses, but had implications for other findings within the dimension of these variables, which would enhance our understanding of how variables like gender system threat and personal control have an effect on levels of system justification.

As an overall analyses, Study 1 findings suggested that the effect of threat on system justification behaviors is more pronounced than the effect of personal control. Complementary threat condition exhibited the highest levels of gender system justification, whereas, hostile condition thus showed the greatest difference in gender system justification levels when moving from low to high baseline economic justification levels. Study 2 findings proposed that the effect of personal control on system justification behaviors is more pronounced than that of threat. Women who have higher personal control seemed to exhibit higher levels of gender system justification behaviors, but participants with low personal control showed an increase in the level of engagement in gender system justification behaviors when moving from lower to higher levels of baseline economic justification.

A consistent theme that emerged across both studies was that manipulations of both, threat and personal control, seemed to be more pronounced at low levels of Time 1 economic system justification. Moreover, there was little effect of either manipulated variable on the participants who were already high on system-justification tendencies. Thus, participants in the complementary sexism threat condition (study 1) showed the highest levels of gender system justification at low baseline levels of Time 1 economic system justification, in comparison to exposure to hostile and benevolent forms of sexism. Further, participants with high personal control showed greater levels of gender system justification compared to those with no control, at low baseline levels of economic system justification.

In addition, results from both studies enable us to gauge how people tend to shift their style of justification from an economic/general sense to a gender based approach. That is, high levels of one type of system justification extend to high levels of other domains of system justification. In the case of both threat and personal control, those who currently engage to a great degree in justifying behaviors for one domain, in this case economic, will go on to subsequently justify inequalities in the system to a high level in other domains, such as gender.

Future Implications

Research involving two experimental studies conducted to examine the extent of system justification behaviors will enhance our understanding of the phenomena whereby individuals from disadvantaged groups (e.g. women) continue to justify the system, consequently reinforcing stereotypes of their group. This theory has implications to explore other phenomena like the compensatory effect, where in people turn to other dimensions in life and weigh them more highly. Hence they might find their lives much richer in that sense. For instance women may rely on their stereotypical communal traits like being relationship-oriented rather than career focused in order to justify the inequalities of pay in a workforce. They may also claim that they are not the bread winners of the family due to gender stereotypical roles demanded by the society, which may put forth an argument in their favor of justifying system inequalities. This theory can be used to raise awareness among advantaged policy makers and even these disadvantaged groups of how and why they might turn to justify the system justifying responses. The theory can also be applied in order to reform system relations, such that disadvantaged groups are given more personal control, thereby reducing their need to compensate by turning to justify the system. These findings suggest that those disadvantaged group members who do not already system justify can be spared from developing the habit of system justification by providing them with ample

opportunities for personal control and diminishing exposure to gender threats. Thus, to prevent the development of habitual system justification tendencies, we could recommend early education efforts among those from disadvantaged groups to develop a sense of personal control and power instead.

Moreover, although these studies showed that those who have a dominant tendency to engage in system justification, one could potentially diminish the strength of this system justifying habits by repeatedly providing these participants with opportunities for direct primary control and voice within their system. Thus, to eliminate existing habitual system justifying tendencies, we could recommend long-term programs that will take these elements into consideration. By gaining depth into understanding the variables associated with engagement of such behavior will allow for a transformation in attitudes of those who try to take system inequalities for granted. Being able to perceive the exact reasons for justifying the wrong doings in society is what is integral and what allows this theory to have implications for general social change, policy reform, and towards community growth.

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